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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/269,501	03/29/1999	YUICHI AKIBA	990345	1114

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EXAMINER

RUDE, TIMOTHY L

ART UNIT PAPER NUMBER

2871

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/269,501

Applicant(s)

AKIBA, YUICHI

Examiner

Timothy L Rude

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 01 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1 ☐ Certified copies of the priority documents have been received.
- 2 ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3 ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Amendment

1. The amendment filed on 30 May 02 has been received and entered as paper number 12.

Claims

2. Claim 1 is amended and claim 23 is added. No new matter is added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5 – 7, and 9 – 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk et al, USPAT 6124971 (Ouderkirk) and further in view of Liquid Crystals, Applications and Uses, Volume 1, by Birendra Bahadur et al (Bahadur) 1990, (Chapters 7 and 10, especially pages 180, 242, 245, and 270).

Art Unit: 2871

As to Claims 1, 2, and 23, Ouderkirk discloses in claims 1, 2 and 8, (columns 16 and 17) all of the elements of claims 1 and 2, except the color filter disposed on the visible side of the absorption-type polarizing film, or between the absorption-type polarizing film and the reflection-type polarizing film and the reflection-type polarizing film for transmitting light linearly polarized in a direction parallel with a transmission axis thereof. Reflection-type polarizing films for transmitting light linearly polarized in a direction parallel with a transmission axis thereof are well known in the art of liquid crystals (see Bahadur, pages 462, 463, and 472). Therefore it would have been obvious to one having ordinary skill in the art of liquid crystals to select a MacNeille prism reflection-type polarizer that transmits linearly polarized light in a direction parallel with a transmission axis thereof. Bahadur teaches the use of color filters on pages 180, 242, 245, and 270. Accordingly as evidenced by Bahadur, ordinary workers in the art would recognize the benefit of color filters between the polarizing films. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid crystal display of Ouderkirk with the color filter of Bahadur to achieve color effects in any of a number of ways.

As to Claim 5, Ouderkirk discloses a backlight in claim 19.

As to Claim 6, Ouderkirk discloses a translucent film (absorbing element) in claim 26.

Art Unit: 2871

As to Claim 7, Ouderkirk discloses an absorption-type polarizing film in claim 30.

As to Claim 9, Ouderkirk discloses a translucent film (absorbing element) in claim 26.

As to Claim 10, Ouderkirk discloses an absorption-type polarizing film in claim 30.

As to Claim 11, Ouderkirk discloses alternate polarizer alignments in claims 20, 21, and 22.

As to Claim 12, Ouderkirk discloses alternate polarizer alignments in claims 20, 21, and 22.

As to Claims 13 – 16 and 20 – 22, Bahadur (Chapters 7 and 10, especially pages 180, 242, 245, and 270) discloses the longstanding and conventional use of planar arrays of red, green, and blue color filters as well as the use of cyan, magenta, and yellow color filters arranged in a given order repeatedly and regularly anywhere in the beam path.

Art Unit: 2871

As to Claim 17, Ouderkirk discloses the use of a dichroic polarizer positioned between the absorption-type polarizing film and the reflection-type polarizing film in claim 31, also column 5, lines 32 – 67 and column 6, lines 1 - 56.

As to Claim 18, Ouderkirk discloses the use of multi-layered dielectric coatings capable of reflecting a light component of incoming light, and having a specified wavelength, while transmitting light components of the incoming light at other wavelengths in column 5, lines 3 – 31.

4. Claims 3, 4, 8, and 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk in view of Bahadur as applied to claims 1, 2, 5 – 7, and 9 – 22, above, and further in view of Hisatake et al, USPAT 5731858 (Hisatake).

As to Claims 3, 4, and 8, Ouderkirk discloses in claim 8 the use of a light absorption film disposed on the reflection-type polarizing film, opposite from the visible side thereof, but Ouderkirk does not disclose the use of a light scattering film on the visible side of the absorption-type polarizing film. Hisatake discloses the use of a light scattering film on the visible side of the absorption-type polarizing film, (Figure 26, column 33, lines 40 – 49). Hisatake is evidence that ordinary workers in the art would recognize the benefit of a light scattering film on the visible side of the absorption-type polarizing film. Therefore, it would have been obvious to one having ordinary skill in the

Art Unit: 2871

art at the time the invention was made to modify the liquid crystal display of Ouderkirk with the light scattering film of Hisatake to improve viewing angle.

As to Claim 19, Ouderkirk does not disclose liquid crystal type. Hisatake discloses the use of a twisted nematic liquid crystal in claim 19, also column 7, lines 48 – 50. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid crystal display of Ouderkirk with the twisted nematic liquid crystal of Hisatake to achieve good contrast ratio.

Response to Arguments

5. Applicant's arguments filed on 30 May 2002 have been fully considered but they are not persuasive.

Applicant's ONLY arguments are as follows:

(1) Applicant makes several arguments as to the performance of the claimed invention and other issues that stem from Applicant's specification.

(2) To establish a *prima facie* case of obviousness, three basic criteria must be met. The references provide no motivation to combine and no reasonable expectation of success (brighter display performance).

Examiner's responses to Applicant's ONLY arguments are as follows:

(1) It is respectfully pointed out that performance issues and other issues that do not pertain to the claimed structure are not relevant to the device claims at issue.

(2) It is respectfully pointed out that the motivations to combine color filters with an LCD to achieve color effects are well known in the art of liquid crystals at the time the invention was made, per rejections above. It is also respectfully pointed out that the claimed brighter display performance is achieved by the use of the reflective polarizer per Ouderkirk (Abstract), and that brightness performance improvement would remain intact subsequent to the combination of the color filters of Bahadur as a well known expected result. Examiner maintains motivation to combine color filters with LCD displays is well known in the art and there is strong expectation of success. Examiner therefore maintains the invention as claimed would truly have been obvious to those having ordinary skill in the art of liquid crystals at the time the invention was made as evidenced by Ouderkirk in view of Bahadur, per rejections above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (703) 305-0418. The examiner can normally be reached on Monday through Thursday.

Art Unit: 2871


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.



Timothy L Rude
Examiner
Art Unit 2871

TLR
October 17, 2002



TOANTON
PRIMARY EXAMINER